



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,365	03/29/2001	Minoru Yonezawa	205187US2RD	2886

22850 7590 07/08/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

SPEARS, ERIC J

ART UNIT	PAPER NUMBER
----------	--------------

2878

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,365

Applicant(s)

YONEZAWA ET AL.

Examiner

Eric J Spears

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-17 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-17 and 19-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11, 13-17, and 19-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1 and 5-8, Claims 1 and 5-8 recite the limitation "both surfaces" in the last line of each claim. There is insufficient antecedent basis for this limitation in the claim.

Regarding Claim 16, Claim 16 implies the limitation that the first and second photodetectors are placed on opposite (or different) sides of a substrate. This limitation directly contradicts the limitation of Claim 8 which recites that the second photodetector is stacked upon the first photodetector. Therefore, it is not possible to determine the true scope of Claim 16, and thus no art has been applied to Claim 16, 17, 19, 20, or 21.

Claims not specifically mentioned are indefinite due to their dependency from an indefinite base claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2878

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kostenbauder (4,754,130).

Regarding Claim 1, Kostenbauder teaches a photodetector comprising a first transparent electrode 12, a second transparent electrode 14 which is made up of a plurality of cells, and a photoelectric transfer part 10 sandwiched between the electrodes. The photodetector receives light from both sides (See Fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostenbauder (4,754,130) in view of Hoffman et al. (4,724,338).

Regarding Claims 5 and 6, Kostenbauder teaches a photodetector comprising a first transparent electrode 12, a second transparent electrode 14 which is made up of a plurality of cells, and a photoelectric transfer part 10 (a transparent semiconductor layer) sandwiched between the electrodes. The photodetector receives light from both sides (See Fig. 1).

Art Unit: 2878

Further regarding Claims 2, 3, 5, and 6, Theil does not teach a sensitizing dye layer. However, Hoffmann teaches a photoelectric transfer part comprising: a sensitizing dye film absorbing light in a wavelength band including a predetermined wavelength; and a carrier transporting layer (which is also a dielectric layer) sandwiched between the sensitizing dye film and the second transparent electrode B (See Fig. 1; Col. 4, lines 1-21). Therefore, it would have been obvious to one of ordinary skill in the art to modify the device of Theil to include such a dye layer to provide for wavelength dependent photodetection, as such the dye layer photodetectors are well known in the art, in order to achieve wavelength dependent detector without the need for filters or other means.

Allowable Subject Matter

Claims 7 and 8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 4, 9-11, 13-15, and 22-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claims 4 and 7, the prior art of record fails to teach or reasonably suggest a photodetector comprising, in addition to the other related features of the claims, the organic semiconductor layers as recited in Claims 4 or 7.

Art Unit: 2878

Regarding Claim 8, the prior art of record fails to teach or reasonably suggest a stacked photodetector comprising, in addition to the other related features of the claims, first and second photodetectors wherein the stacked photodetectors can detect light as recited in Claim 8, lines 6-9.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aldrich et al. (3,935,441) teaches a dual sides photodetector.

Inushima et al. (5,608,666) teaches a dual sides photodetector.

Tsuji et al. (5,196,702) teaches a dual sides photodetector.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2878

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Spears whose telephone number is (703) 306-0033. The examiner can normally be reached on Monday-Friday from 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (703) 308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

EJS
06/28/03


Que T. Le
Primary Examiner